

# 모듈 제품 사양서

양산 / 개발 / 평가

|       |              |
|-------|--------------|
| 제 품 명 | LTA460HJ03-0 |
| 작성일자  | 2010. 06. 21 |

|       |              |         |             |          |                |       |
|-------|--------------|---------|-------------|----------|----------------|-------|
| 등록 No |              |         | 기안부서        | 개발3G     | 기안자            | 장 지 은 |
| 배포일자  | 2009/10/27   | 배포공정 No | INLINE/외관검사 | 적용 Model |                |       |
| 제 목   | [3] 제품 외관 사양 |         | 모 표준번호      |          | LTA460HJ03-002 |       |

[라벨 및 각인]



[BLU 뒷면 외관사양]

| 구분               | 내용        |
|------------------|-----------|
| 제품LABEL          |           |
| B/L LABEL        |           |
| T/C 각인<br>[우측하단] | <br>460HJ |

|       |                            |         |             |          |                |
|-------|----------------------------|---------|-------------|----------|----------------|
| 등록 No | 기안부서                       |         |             |          |                |
| 배포일자  | 2009/10/27                 | 배포공정 No | INLINE/외관검사 | 적용 Model | LTA460HJ03-002 |
| 제 목   | [4] IT 단 82 pin 쪽 보드 연결 사양 |         |             | 모 표준번호   |                |

[SIGNAL 51PIN MAP]

| Pin | Symbol  | Description           | Pin | Symbol    | Description              |
|-----|---------|-----------------------|-----|-----------|--------------------------|
| 1   | 12V     | DC power supply       | 26  | Rx4[A]P   | 4th, 8thLVDS Signal +    |
| 2   | 12V     | DC power supply       | 27  | Rx4[B]N   | 4th, 8thLVDS Signal -    |
| 3   | 12V     | DC power supply       | 28  | Rx4[B]P   | 4th, 8thLVDS Signal +    |
| 4   | 12V     | DC power supply       | 29  | Rx4[C]N   | 4th, 8thLVDS Signal -    |
| 5   | 12V     | DC power supply       | 30  | Rx4[C]P   | 4th, 8thLVDS Signal +    |
| 6   | GND     | Ground                | 31  | GND       | Ground                   |
| 7   | GND     | Ground                | 32  | Rx4CLK-   | 4th, 8thLVDS Clock -     |
| 8   | GND     | Ground                | 33  | Rx4CLK+   | 4th, 8thLVDS Clock +     |
| 9   | GND     | Ground                | 34  | GND       | Ground                   |
| 10  | Rx2[A]N | 2nd, 6thLVDS Signal - | 35  | Rx4[D]N   | 4th, 8thLVDS Signal -    |
| 11  | Rx2[A]P | 2nd, 6thLVDS Signal + | 36  | Rx4[D]P   | 4th, 8thLVDS Signal +    |
| 12  | Rx2[B]N | 2nd, 6thLVDS Signal - | 37  | Rx4[E]N   | 4th, 8thLVDS Signal -    |
| 13  | Rx2[B]P | 2nd, 6thLVDS Signal + | 38  | Rx4[E]P   | 4th, 8thLVDS Signal +    |
| 14  | Rx2[C]N | 2nd, 6thLVDS Signal - | 39  | GND       | Ground                   |
| 15  | Rx2[C]P | 2nd, 6thLVDS Signal + | 40  | SCL       | I2C SCL                  |
| 16  | GND     | Ground                | 41  | SDA       | I2C SDA                  |
| 17  | Rx2CLK- | 2nd, 6thLVDS Clock -  | 42  | TCON-RDY  | TCON READY signal        |
| 18  | Rx2CLK+ | 2nd, 6thLVDS Clock +  | 43  | B-INT     | Bus release              |
| 19  | GND     | Ground                | 44  | ACC SEL   | ACC On/Off               |
| 20  | Rx2[D]N | 2nd, 6thLVDS Signal - | 45  | LVDS SEL  | JEIDA/Normal             |
| 21  | Rx2[D]P | 2nd, 6thLVDS Signal + | 46  | DCC SEL   | DCC ON/OFF               |
| 22  | Rx2[E]N | 2nd, 6thLVDS Signal - | 47  | LUT SEL 0 | DCC Look-up Table Select |
| 23  | Rx2[E]P | 2nd, 6thLVDS Signal + | 48  | LUT SEL 1 |                          |
| 24  | GND     | Ground                | 49  | LUT SEL 2 |                          |
| 25  | Rx4[A]N | 4th, 8thLVDS Signal - | 50  | SEL0      | SEC Internal Use Only    |
|     |         |                       | 51  | SEL1      |                          |

[SIGNAL 41PIN MAP]

| Pin | Symbol  | Description           | Pin | Symbol  | Description           |
|-----|---------|-----------------------|-----|---------|-----------------------|
| 1   | 12V     | DC power supply       | 21  | Rx1[D]P | 1st, 5thLVDS Signal + |
| 2   | 12V     | DC power supply       | 22  | Rx1[E]N | 1st, 5thLVDS Signal - |
| 3   | 12V     | DC power supply       | 23  | Rx1[E]P | 1st, 5thLVDS Signal + |
| 4   | 12V     | DC power supply       | 24  | GND     | Ground                |
| 5   | 12V     | DC power supply       | 25  | Rx3[A]N | 3rd, 7thLVDS Signal - |
| 6   | GND     | Ground                | 26  | Rx3[A]P | 3rd, 7thLVDS Signal + |
| 7   | GND     | Ground                | 27  | Rx3[B]N | 3rd, 7thLVDS Signal - |
| 8   | GND     | Ground                | 28  | Rx3[B]P | 3rd, 7thLVDS Signal + |
| 9   | GND     | Ground                | 29  | Rx3[C]N | 3rd, 7thLVDS Signal - |
| 10  | Rx1[A]N | 1st, 5thLVDS Signal - | 30  | Rx3[C]P | 3rd, 7thLVDS Signal + |
| 11  | Rx1[A]P | 1st, 5thLVDS Signal + | 31  | GND     | Ground                |
| 12  | Rx1[B]N | 1st, 5thLVDS Signal - | 32  | Rx3CLK- | 3rd, 7thLVDS Clock -  |
| 13  | Rx1[B]P | 1st, 5thLVDS Signal + | 33  | Rx3CLK+ | 3rd, 7thLVDS Clock +  |
| 14  | Rx1[C]N | 1st, 5thLVDS Signal - | 34  | GND     | Ground                |
| 15  | Rx1[C]P | 1st, 5thLVDS Signal + | 35  | Rx3[D]N | 3rd, 7thLVDS Signal - |
| 16  | GND     | Ground                | 36  | Rx3[D]P | 3rd, 7thLVDS Signal + |
| 17  | Rx1CLK- | 1st, 5thLVDS Clock -  | 37  | Rx3[E]N | 3rd, 7thLVDS Signal - |
| 18  | Rx1CLK+ | 1st, 5thLVDS Clock +  | 38  | Rx3[E]P | 3rd, 7thLVDS Signal + |
| 19  | GND     | Ground                | 39  | GND     | Ground                |
| 20  | Rx1[D]N | 1st, 5thLVDS Signal - | 40  | SEL0    | SEC Internal Use Only |
|     |         |                       | 41  | SEL1    |                       |

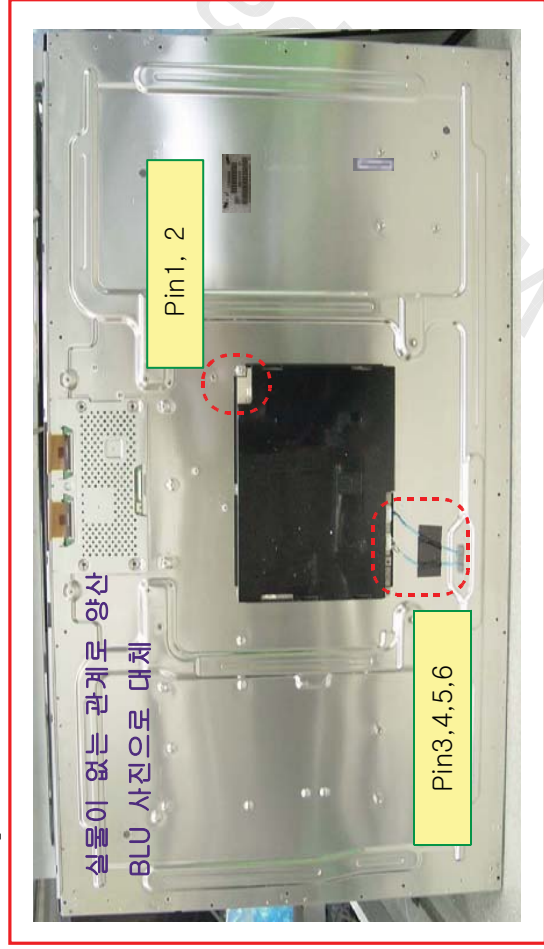
|       |                  |         |      |          |                          |  |
|-------|------------------|---------|------|----------|--------------------------|--|
| 등록 No |                  |         |      | 기안부서     |                          |  |
| 배포일자  | 2009/04/07       | 배포공정 No | 검사공정 | 적용 Model | 40"/46" 후나이향 EDGE LED 모델 |  |
| 제 목   | [4-1] 제품 Pin Map |         |      | 모 표준번호   |                          |  |

PD Board JIG 체결 및 분해 방법

[선행 SETTING 참조사항]

|               |          |                           |      |
|---------------|----------|---------------------------|------|
| VBL           | PD Board | 구동전압                      | 220V |
|               |          | DIM 전압                    | -    |
|               | IP TYPE  | 형태                        |      |
|               |          | PWM DUTY                  |      |
| SHAKE / LAMP수 |          | Edge LED/ LED 248EA (46") |      |

[PIN MAP]



PD Board JIG 체결 및 분해 방법

|                                                     |                                                                                                                                               |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <p>케이블 On/Off Switch 있는 것(FT용)<br/>없는 것(AGING용)</p> | <p>220V 이므로<br/>안전에 유의!!</p>                                                                                                                  |
| cable                                               | cable connector 확대 (2 pin)                                                                                                                    |
| <p>1. pd 보드 연결<br/>2. 멀티탭 연결</p>                    | <p>BLU 와 체결 모습</p> <p>- AGING시 : 반드시 모든 케이블 체결 후 멀티탭 Power ON</p> <p>- FT시 : 반드시 모든 케이블 체결 후 케이블의 Switch ON</p> <p>&lt;OFF&gt; &lt;ON&gt;</p> |

BLU 점등 전원이 220V 입니다. 반드시 모듈측 CNT 체결후 PALLETE SWITCH ON하시기 바랍니다.

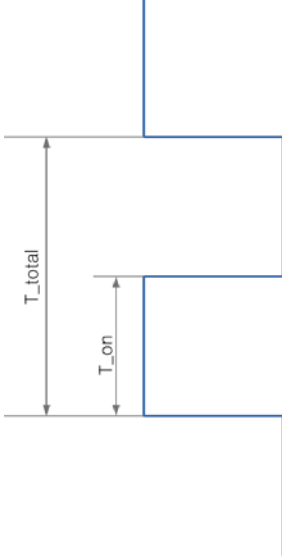
| PIN NO. | SYMBOL    | REMARK                 |
|---------|-----------|------------------------|
| 1,2     | Vin       | Input Power (A/C 220V) |
| 3,4,5,6 | LED Drive | Output Current TBD mA  |

|       |                 |  |         |        |                |  |
|-------|-----------------|--|---------|--------|----------------|--|
| 등록 No |                 |  |         | 기안부서   |                |  |
| 배포일자  | 2009/09/10      |  | 배포공정 No | 검사공정   | LTA460HJ03-002 |  |
| 제 목   | [4-] 제품 Pin Map |  |         | 모 표준번호 |                |  |

[설비 SETTING 참조사항]

[Recommended Electrical Characteristics]

| Items<br>Note(1) | Symbol    | Conditions                 | Specifications |      |        | Unit  | 비 고    |
|------------------|-----------|----------------------------|----------------|------|--------|-------|--------|
|                  |           |                            | Min.           | Typ. | Max.   |       |        |
| Input            | Voltage   | -                          | 90             | -    | 264    | Vac   | Ta=25℃ |
|                  | Current   | Vin=90V                    | -              | -    | 4.5    | Arms  |        |
| Output           | +12V      | Vin=100~240V <sub>ac</sub> | 11.875         | 12.5 | 13.125 | V     |        |
|                  | LED Drive | Ext_DIM=100%               | -              | TBD  | -      | mArms | (2)    |
|                  | STB5.3V   | Vin=100~240V <sub>ac</sub> | 5.035          | 5.3  | 5.565  | V     |        |
| DIM Frequency    | Fpwm      | Vin=90~264V                | TBD            |      |        | Hz    |        |
| PWM Duty         | -         | -                          | 20             |      | 100    | %     | (3)    |
| PS_ON            | ON        | Floating                   | 2.5            | -    | 5.565  | V     |        |
|                  | OFF       | Low(GND)                   | 0              | -    | 0.8    |       |        |
| BL_ON            | ON        | Floating                   | 2.5            | -    | 5.565  | V     |        |
|                  | OFF       | LOW(GND)                   | 0              | -    | 0.8    |       |        |
| Dimming          | Ext_DIM   | V <sub>HIGH</sub>          | 3.0            | -    | 5.2    | V     |        |
|                  |           | V <sub>LOW</sub>           | 0              | -    | 0.4    |       |        |



Note(1) All data is measured after 120min warm-up

Note(2) Test Equipment

-DC Current Probe : TCP312 (Tektronix)

-Oscilloscope : TDS5054 (Bandwidth 20MHz)

Note(3) PWM Duty(%) = (T<sub>on</sub> / T<sub>total</sub>) \* 100

|       |                 |         |  |      |  |          |        |
|-------|-----------------|---------|--|------|--|----------|--------|
| 등록 No |                 |         |  | 기안부서 |  |          |        |
| 배포일자  | 2009/09/10      | 배포공정 No |  | 검사공정 |  | 적용 Model |        |
| 제 목   | [4-] 제품 Pin Map |         |  |      |  |          | 모 표준번호 |

[설비 SETTING 참조사항]

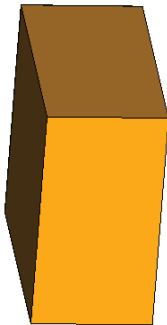
| ITEM                 | SYMBOL        | MIN.     | TYP. | MAX. | UNIT | NOTE    |
|----------------------|---------------|----------|------|------|------|---------|
| Power Supply Voltage | VDD           | 10.8     | 12   | 13.2 | V    | (1)     |
| Interface Type       | AIPI+         | Tcon 내장형 |      |      |      |         |
| Power Consumption    | (a) Black     | -        | 1270 | 1370 | mA   | (2),(3) |
|                      | (b) White     | -        | 1310 | 1420 | mA   |         |
|                      | (c) N-pattern | -        | 1280 | 1410 | mA   |         |
| Vsync Frequency      | fV            | 90       | 120  | 130  | Hz   |         |
| Hsync Frequency      | fH            | 100      | 135  | 150  | kHz  |         |
| Main Frequency       | fDCLK         | 260      | 297  | 320  | MHz  |         |
| Rush Current         | IRUSH         | -        | -    | 5    | A    | (4)     |

[illegible]

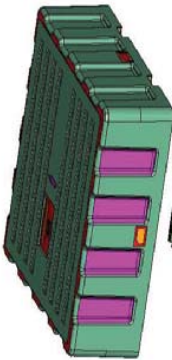


|       |                 |         |  |          |                |  |  |
|-------|-----------------|---------|--|----------|----------------|--|--|
| 등록 No |                 |         |  | 기안부서     |                |  |  |
| 배포일자  | 2009/09/10      | 배포공정 No |  | 적용 Model | LTA460HJ03-002 |  |  |
| 제 목   | 포장 사양 [Packing] |         |  | 모 표준번호   |                |  |  |

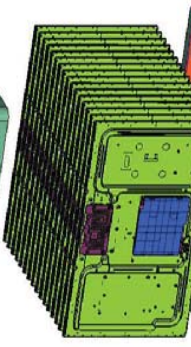
| 항 목            | 중 량                 | 비 고                    |
|----------------|---------------------|------------------------|
| TFT-LCD MODULE | 11.3 kg/pcs         | 실리카겔 제품당 3개입 (10g X 3) |
| BOX            | 200.8 kg/box (포장포함) | 16 modules/box         |
|                |                     |                        |



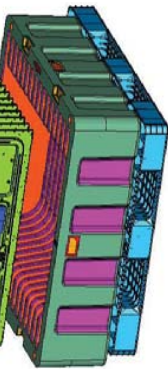
Packing  
-Pallet  
box



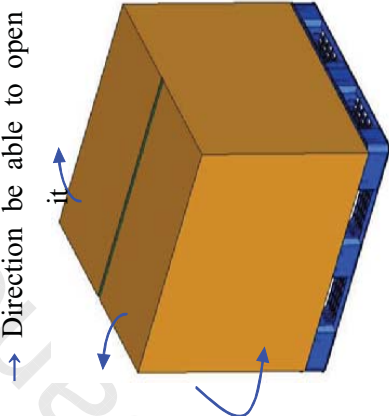
Cushion-  
Foam



LCD Module



Cushion-  
Foam  
Pallet-Plastic



→ Direction be able to open it

▶ Packing Pallet Box  
(LJ69-02227A, 46"공용)

▶ Cushion-Foam  
(LJ69-02068B, 46"EDGE)

▶ Module ( 16 EA )  
in Bag-Shielding  
(6902-001218, 46"공용)  
with Silica Gel 3ea/1Module  
→ Module배면에 투입

▶ Pallet-Plastic  
(LJ69-01833A, 46"공용)

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